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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,522	03/22/2004	Kazuhiko Kikuchi	016907-1648	9197
22428	7590	07/12/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			LEUNG, PHILIP H	
			ART UNIT	PAPER NUMBER
			3742	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/805,522

Applicant(s)

KIKUCHI ET AL.

Examiner

Philip H. Leung

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3-22-2004</u> .   | 6) <input type="checkbox"/> Other: ____                                     |

### **DETAILED ACTION**

1. The drawings filed 8-3-2004 are acceptable.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation “at least one magnetic field attenuating mechanism unit which is provided between a specific magnetic field intensity measuring point and coil” at the end of claims 1 and 8 is unclear because the term “a specific magnetic field intensity measuring point” has not been defined. More particularly, what is a measuring point? A point without a specific positional definition relative to other claimed element is just a random location. Furthermore, the term is meaningless because there is no device in the claimed structure for performing the “measuring of the magnetic field intensity”. Moreover, what is the relation between “a magnetic field attenuating mechanism” at line 8 and “at least one magnetic field attenuating mechanism unit” at line 12 of claim 1 (and similar terms in claim 8)? Are they the same or different components? In regard to claims 2-5 and 9-12, the limitations are indefinite because of the use of a conditional term “if” at line 2 of claims 2, 4, 9 and 11. Clarification and correction are suggested.

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 6 and 7, as far as the claims are understood and proper, are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al (US 2002/0186991 A1).

Watanabe shows an image forming apparatus comprising: a heating member (roller 11) which includes a conductive member (paragraph [0044]) containing a coil (10) for, when supplied with a voltage and current specific frequency, producing magnetic field of a specific magnetic field intensity and generating heat by the magnetic field supplied from the coil; a magnetic field attenuating mechanism (blocking plate 31, 32) which is capable of attenuating the magnetic field intensity of the magnetic field passing through the mechanism; and at least one magnetic field attenuating mechanism unit (part of the shield member) which is provided between a specific magnetic field intensity measuring point (at the point where the temperature sensor 21 is located) and coil (10) (see Figures 1-7 and paragraphs [0041] – [0076]). In regard to claim 6, it shows that the plate 31, 32 having a thickness of about 0.1-2 mm is formed of a conductive layer including aluminum and its alloy (see paragraphs [0059], [0067], [0072] and [0074]). In regard to claim 7, since the roller 10 is 40 mm in diameter, therefore the distance between the blocking plate 31, 32 is less than 80 mm (see paragraph [0064]).

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6. Claim 1, as far as the claim is understood and proper, is further rejected under 35 U.S.C. 102(b) as being anticipated by Sano (JP 10-91019).

Sano shows an image forming apparatus comprising: a heating member (roller 16) which includes a conductive member containing a coil (19) for, when supplied with a voltage and current specific frequency, producing magnetic field of a specific magnetic field intensity and generating heat by the magnetic field supplied from the coil; a magnetic field attenuating mechanism (shield member 21) which is capable of attenuating the magnetic field intensity of the magnetic field passing through the mechanism; and at least one magnetic field attenuating mechanism unit (part of the shield member) which is provided between a specific magnetic field intensity measuring point (at the point where the thermistor 20 is located) and coil (19) (see Figures 1-10 and the English abstract).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. Claims 2-5 and 8-14, as far as the claims are understood and proper, are rejected under 35 U.S.C. 103(a) as being obvious over Watanabe et al (US 2002/0186991 A1), in view of Imai et al (US 2002/0190060 A1)


As set forth above, Watanabe shows every feature as claimed except for the relative location of the induction coil 10 and the roller 11. Imai shows an inductive image forming device including a heating roller 1 and an induction coil 3. The induction heating coil 3 is located either inside the roller (Figures 1-21) or outside of the roller (Figures 22-29). It would have been obvious to an ordinary skill in the art at the time of invention to modify Watanabe to locate the induction heating coil inside or outside the roller depending on the overall design arrangement of the fixing device as long as it is sufficiently adjacent the roller in order to heat the roller, in view of the teaching of Imai. In regard to claims 2-5 and 9-13, the claimed relation between the thickness of the heating layer and the shielding layer and the skin depth would be obviously similar since it is well known in induction theory that the skin depth is a function of the thickness and the frequency. Most importantly, these claims only recite a conditional (with the use of "if") limitation without any positive structure.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip H Leung whose telephone number is (571) 272-4782.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on (571) 472-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Philip H Leung  
Primary Examiner  
Art Unit 3742

P.Leung/pl  
7-7-2005